

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : **RICOH CO LTD**

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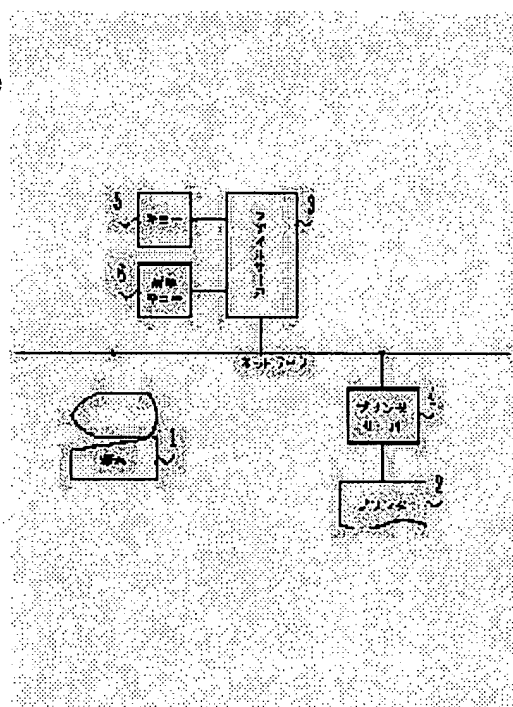
(72)Inventor : **OTA NAOKI**

## (54) NETWORK PRINTER

### (57)Abstract:

**PURPOSE:** To eliminate the necessity of transmitting the data of a file for which printing is completed from a terminal again when the data is reprinted by copying the job that a file server finishes delivering to a printer server and storing the job in a history queue.

**CONSTITUTION:** Printing request data is transmitted from a terminal 1 to a file server 3 and the file server 3 spools this data in the queue 5 for the printer 2 on a network. The file server 3 delivers the job for the printer 2 from the queue 5 to a printer server 4 in order. At this time, the file server 3 copies the job in a history queue 6. When a user wants to print the file for which printing was previously completed again, the job stored in the history queue 6 is designated. Thus, the job can be outputted to the printer 2 on the network without retransmitting data from a terminal 1.



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CLAIMS

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[Claim(s)]

[Claim 1] The terminal which outputs a printing demand on a network, and the file server which manages the queue of the printer on a network, In network printer equipment equipped with the printer server which passes the job of this queue to a printer, and the printer which performs printing according to this job to said file server Network printer equipment characterized by constituting so that it may re-print from a printer using the job which established the means which carries out the constant-rate storage of the job which it finished handing over to a printer server, and was copied for this storage means.

[Claim 2] Network printer equipment according to claim 1 characterized by forming a means to delete the job which went through predetermined time among the jobs copied for the above-mentioned storage means in the above-mentioned file server.

[Claim 3] Network printer equipment according to claim 1 characterized by establishing a means to perform each processing which includes a copy, a classification, and deletion in the above-mentioned file server to the job copied for the above-mentioned storage means.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to network printer equipments, such as LAN.

[0002]

[Description of the Prior Art] In conventional network printer equipment, the user transmitted print data to the file server from the terminal, handed over the print job from the file server one by one to the printer server, and was performing printing. Moreover, when the file which carried out the completion of printing was printed again, the user was broadcasting the file again to the file server from the terminal. In addition, JP,64-36461,A, JP,5-26405,U, etc. are one of things about this kind of equipment.

[0003]

[Problem(s) to be Solved by the Invention] With the above-mentioned conventional technique, when the file which carried out the completion of printing previously was printed again, if the file which a user wants to print again from a terminal was not retransmitted to a file server, there was a fault that the same printed matter could not be outputted from a printer. The purpose of this invention is by releasing a user's terminal to offer the network printer equipment which can use a terminal efficiently, while such a trouble is improved, it is not necessary to transmit the data again from a terminal and when re-printing the data of the file which carried out the completion of printing previously, and transmitting data for re-printing. Moreover, the means (storage) which carries out the constant-rate storage of the job which it finished handing over to a printer server is formed in a file server, and when it considers as the configuration in which re-printing is possible from a printer, without broadcasting again the file data which carried out the completion of printing previously from a terminal to the queue of a printer, it aims at enabling it to use the storage efficiently. Furthermore, when it considers as said configuration, it aims at a user enabling it to process copy, classification, deletion, etc. to his job.

[0004]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the network printer equipment of this invention The file server which has the means (6 of drawing 1) which carries out the constant-rate storage of the terminal (1 of drawing 1) which outputs a printing demand on a network, and the job which manages the queue of the printer on a network and it finished handing over to a printer server (3 of drawing 1), The printer server which passes the job received from the queue to a printer (4 of drawing 1 R> 1), According to the job, it has the printer (2 of drawing 1) which performs printing, and the description is to have constituted so that it might re-print from a printer, without broadcasting again the data of the file in which the user did the completion of printing previously from a terminal to the queue of a printer. Moreover, said file server has the description in deleting the job which went through fixed time amount in the queue which carries out the constant-rate storage of the job which it finished handing over to a printer server. Moreover, said file server has the description in performing each processings (a copy, a classification, deletion, etc.) to the job in a queue in the queue which carries out the constant-rate storage of the job which it finished handing over to a printer server.

[0005]

[Function] In this invention, a file server can be re-printed from a network printer, without transmitting the data again from a terminal, when a user re-prints the data of the file which carried out the completion of printing previously, since the job which it finished handing over to a printer server is copied and a hysteresis queue is made to carry out constant-rate storage. In addition, when specifying a job from a hysteresis queue, the ID number of the accumulated job is made to display and specify it as the display of a user terminal, or the ID number is told with e-mail, and is made to specify. Moreover, during this re-printing, a user's terminal is released and can be used more efficiently. Moreover, since the job which went through fixed time amount is deleted from a hysteresis queue, the magnitude of the capacity of the storage assigned to a hysteresis queue becomes smaller, and it can use a storage efficiently. Furthermore, when the need for example, for re-printing is lost by displaying the hysteresis queue and making a user add a unique name to job correspondence, a user can delete an unnecessary job by himself using the job name.

[0006]

[Example] Hereafter, a drawing explains one example of this invention. Drawing 1 is the block diagram of the network system in one example of this invention. The terminal 1 which has a means by which the configuration of this example outputs a printing demand on a certain network, The file server 3 which carries out queue management of the printer 2 which has a means to perform printing processing, and the printer 2 on a network, There are the printer server 4 which has a means to pass the job received from the queue to the printer 2 to a printer, a queue 5 to a printer 2, and a queue (it is henceforth called a hysteresis queue) 6 which carries out the constant-rate storage of the job which it finished handing over to the printer server 4.

[0007] In this example, a user outputs a printing demand from a terminal 1 to the printer 2 on a network first like drawing 2. The printing requested data from a terminal 1 is transmitted to a file server 3, and a file server 3 spools this to the queue 5 to the printer 2 on a network. A file server 3 hands over the job over a printer 2 from a queue 5 to the printer server 4 in order. At this time, a file server 3 copies that job also to the hysteresis queue 6. Also about the job handed over to all other printers on a network, it is similarly copied to this hysteresis queue 6, and is accumulated in it in order. Thereby, a user can output to the printer 2 on a network by specifying the job accumulated in the hysteresis queue 6 to print again the file which carried out the completion of printing previously, without broadcasting data again from a terminal 1. In addition, there is an approach of displaying the ID number of the job by which the user was accumulated in the hysteresis queue 6 from the hysteresis queue 6 to a user's terminal 1 as an approach of specifying a job on a display, or a method of telling the ID number of a job with e-mail, and a user specifies a job from the hysteresis queue 6 by this ID number.

[0008] Next, other examples are described. In the above-mentioned example, when the medium of the hysteresis queue 6 which carries out the constant-rate storage of the job handed over by the printer server 4 is small, if the data of the constant rate are memorized, the problem that the storage of the medium itself becomes impossible will remain. So, a file server 3 adds the information (for example, time stamp) which can judge whether it is the job accumulated in the job accumulated in the hysteresis queue 6 when, and it consists of this examples so that the job which went through fixed time amount may be deleted.

[0009] Moreover, in the above-mentioned example, the problem that a user cannot perform each processing to his job remains in the hysteresis queue 6 which carries out the constant-rate storage of the job which it finished handing over to the printer server 4. So, when a job is accumulated in the hysteresis queue 6, it constitutes from this example so that a file server 3 may input the unique job name over this job into a user's terminal 1. That is, at the time of job are recording, display this job on the display of a terminal 1, a user is made to input a job name, and a user is henceforth enabled to perform each processing (for example, a copy, a classification, deletion) using this job name.

[0010]

[Effect of the Invention] When a user re-prints the data of the file which carried out the completion of printing previously according to this invention, it can re-print from a network printer, without transmitting the data again from a terminal. Moreover, while transmitting data by this for re-printing, a

user's terminal is released and can use a terminal more efficiently. Moreover, by constituting so that it may be deleted from a hysteresis queue about the job which went through fixed time amount, the magnitude of the capacity of the storage assigned to a hysteresis queue becomes smaller, and can use a storage efficiently. Furthermore, when the need for example, for re-printing is lost by constituting so that a user may perform each processing using a job name etc., a user can delete the job by himself.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the block diagram of the network system in one example of this invention.

[Drawing 2] It is the sequence diagram showing actuation of the network system in one example of this invention.

[Description of Notations]

1: A terminal, 2:printer, 3:file server, 4:printer server, 5:queue, 6 : hysteresis queue.

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